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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,055	11/24/2003	Krishna M. Ravi	HES 2002-IP-008094U2	3248

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EXAMINER

KUGEL, TIMOTHY J

ART UNIT	PAPER NUMBER
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1712

MAIL DATE	DELIVERY MODE
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08/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/721,055

Applicant(s)

RAVI ET AL.

Examiner

Timothy J. Kugel

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22,24-34,36-59,88 and 89 is/are pending in the application.
- 4a) Of the above claim(s) 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22,24-32,34,36-59,88 and 89 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-22,24-34,36-59,88 and 89 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-22, 24-34, 36-59, 88 and 89 are pending as amended on 31 January 2007, claims 23 and 35 being cancelled. Claim 33 is withdrawn from further consideration.

2. The text of those sections of Title 35, US Code not included in this action can be found in a prior Office action.

Response to Amendment

3. Applicant's terminal disclaimer, filed 23 July 2007, has been fully considered and is proper.

The provisional rejection of claims 1-3, 5, 12-22, 24-29, 40, 41, 43-48, 50-59, 88 and 89 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 52, 53, 55-64, 66-69, 72-75, 77-81, 85, 88 and 90 of copending Application 10/350,533 has been withdrawn.

4. The declarations of B. Raghava Reddy—dated 22 June 2007 and 12 July 2007—and of Krishna M. Ravi—dated 19 June 2007—all filed 23 July 2007 under 37 CFR 1.132, are insufficient to establish that US Patent Application Publication 2004/0144537 (Reddy hereinafter) and/or Application Publication 2004/0171499 (Ravi hereinafter) are not “by another.”

In order to be not “by another,” the inventive entity of the subject matter relied upon in a reference must be shown to be the same as the inventive entity of the instant claims.

The inventive entity of the instant claims, as shown by the declaration filed 16 March 2004 is Krishna M. Ravi, Donald L. Whitfill and B. Raghava Reddy.

The inventive entity of the reference Reddy, as shown by the listing of inventors on the US Patent Application Publication is B. Raghava Reddy, Krishna M. Ravi and Michael J. Szymanski. The declarations filed 23 July 2007 only establish that Krishna M. Ravi and B. Raghava Reddy are each an inventor of the instant claims and are each an inventor of the subject matter relied upon in the reference—this is already known as each is listed as an inventor in the respective applications. What needs to be established are the roles of Michael J. Szymanski in the subject matter of relied upon in the rejection and of Donald L. Whitfill in the instant claims. If each are co-inventors of the respective subject matter—which is the examiner’s position based on the evidence of record—then the reference Reddy is “by another” and therefore qualifies as prior art under 35 USC 102(e).

The inventive entity of the reference Ravi, as shown by the listing of inventors on the US Patent Application Publication is Krishna M. Ravi and B. Raghava Reddy. The declarations filed 23 July 2007 only establish that Krishna M. Ravi is an inventor of the instant claims and an inventor of the subject matter relied upon in the reference—this is already known as Krishna M. Ravi is listed as an inventor in the respective applications. What needs to be established is the role of Donald L. Whitfill in the instant claims. If he

is a co-inventor of the instant claims—which is the examiner's position based on the evidence of record—then the reference Ravi is “by another” and therefore qualifies as prior art under 35 USC 102(e).

Claim Rejections - 35 USC § 102

5. Although not directed to the elected species, in the interest of compact prosecution, claims 1-3, 5-7, 11, 13, 14, 17, 18, 24, 26-30, 41, 43, 44, 46-48, 50-52, 54-56, 58, 88 and 89 stand rejected under 35 USC 102(b) as being anticipated by US Patent 3,145,773 (Jorda hereinafter).

Jorda teaches a method of completing formations traversed by an oil, water or gas producing well (Column 1 Lines 10-18) comprising injecting a slurry of oil or water and expandable elastic particles covered with an impermeable film or layer (Column 3 Lines 1-58).

Since Jorda teaches the same composition as claimed, the density, compressibility and pressure and temperature resistance of the particles and the variability of the density of the fluid of the Jorda composition would inherently be the same as claimed.

6. Although not directed to the elected species of hydrophobic silane coated particles, in the interest of compact prosecution, claims 1-3, 5-7, 11-22, 24-29, 40, 41, 43-48, 51-59, 88 and 89 stand rejected under 35 USC 102(e) as being anticipated by Reddy.

Reddy teaches a method of using—specifically cementing (§0006)—a fluid in a subterranean formation comprising introducing said fluid into the subterranean formation through a well bore (§0001)—including pumping (§0017)—wherein the fluid comprises a base fluid and a portion of elastic particles (Abstract, §0006), wherein the base fluid is present at from about 30% to about 120% by weight of the cement (§0017) and may be an aqueous or organic liquid and if organic is capable of emulsifying a water solution of salts (§0008) and the particles are present in the range of from about 1% to about 200% by weight of the cement (§0007), can be pre-expanded up to about 8 times their original diameter, which calculates to up to 268 times their original volume by $\frac{4}{3}\pi r^3$ before being added to composition with an internal fluid—including the elected internal fluid, air (§§0007 and 0008)—are comprised of a copolymer of styrene and divinylbenzene or styrene and acrylonitrile or a terpolymer of styrene and vinylidene chloride and acrylonitrile (§0006)—including EXPANCEL particles as exemplified by applicant (§0008).

Since Reddy teaches the same composition as claimed, the density, compressibility and pressure and temperature resistance of the particles and the variability of the density of the fluid of the Reddy composition would inherently be the same as claimed.

The applied reference has a common assignee and at least one common inventor with the instant application. Based upon the earlier effective US filing date of the reference, it constitutes prior art under 35 USC 102(e). This rejection under 35 USC 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention

disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

7. Claims 1-7, 11-22, 32, 34, 36-38, 40, 41, 88 and 89 stand rejected under 35 USC 102(e) as being anticipated by Ravi.

Ravi teaches a method of using—including in cementing and drilling ($\text{\text{¶}}0009$)—a fluid in a subterranean formation comprising introducing said fluid into the subterranean formation ($\text{\text{¶}}0002$) through a well bore (Abstract)—including pumping ($\text{\text{¶}}0003$)—wherein the fluid comprises a base fluid and a portion of elastic particles ($\text{\text{¶}}0011$), wherein the base fluid is present at from about 25% to about 150% by weight of the cement and may be an aqueous or organic liquid and if organic is capable of emulsifying a water solution of salts—including mineral oils, synthetic oils and esters as claimed ($\text{\text{¶}}0017$) and the particles are present in the range of from about 1% to about 200% by weight of the cement, have a specific gravity of from about 0.3 to about 0.99, a compressibility of about $1.5 \times 10^{-3} \text{ psi}^{-1}$ to about $1.5 \times 10^{-9} \text{ psi}^{-1}$, are substantially impermeable to the fluids typically encountered during cementing operations ($\text{\text{¶}}0018$), can be pre-expanded up to about 40 times their original volume before being added to composition with an internal fluid—including the elected internal fluid, air ($\text{\text{¶}}0019$)—are comprised of a copolymer of styrene and divinylbenzene or styrene and acrylonitrile or a terpolymer of styrene and vinylidene chloride and acrylonitrile ($\text{\text{¶}}0020$) and can withstand pressures in excess of 21,000 psi without crushing ($\text{\text{¶}}0023$)—including EXPANCEL particles as exemplified by

applicant (¶¶0019-0021)—coated with hydrophobic silane material (Claims 1 and 16-18).

Since Ravi teaches the same composition as claimed, the variability of the density and the temperature resistance of the particles of the Ravi composition would inherently be the same as claimed.

The applied reference has a common assignee and at least one common inventor with the instant application. Based upon the earlier effective US filing date of the reference, it constitutes prior art under 35 USC 102(e). This rejection under 35 USC 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Claim Rejections - 35 USC § 103

8. Although not directed to the elected species, in the interest of compact prosecution, claims 8-10, 34, 36-39 and 42 stand rejected under 35 USC § 103(a) as being unpatentable over Johnson in view of Jorda as applied to claims 1-3, 5-7, 11, 13, 14, 17, 18, 24, 26-30, 41, 43, 44, 46-48, 50-52, 54-56, 58, 88 and 89 above.

Johnson teaches a method of drilling and cementing a wellbore comprising drilling a wellbore wherein the wellhead is positioned on the ocean floor (Column 1 Lines 8-13 and 58-61) and the assembly comprises pipe strings extending downward

that are identical to pipe strings extending upward (Figure 2 and Column 2 Lines 6-9) and a riser to inject mud (Figure 3 Reference No. 53 and Column 4 Lines 15-20).

Johnson does not disclose expressly injecting a fluid of the composition claimed.

Jorda teaches a method of completing formations traversed by an oil, water or gas producing well comprising injecting a slurry of oil or water and expandable elastic particles covered with an impermeable film or layer as detailed above.

Since Jorda teaches the same composition as claimed, the density, compressibility and pressure and temperature resistance of the particles and the variability of the density of the fluid of the Jorda composition would inherently be the same as claimed.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the fluid composition of Jorda in the method of Johnson. The motivation to do so would have been to prevent contamination of the oil by water from an adjacent formation (Jorda Column 1 Lines 19-28).

9. Although not directed to the elected species of hydrophobic silane coated particles, in the interest of compact prosecution, claims 8-10, 34, 36-39 and 42 stand rejected under 35 USC § 103(a) as being unpatentable over Johnson in view of Reddy as applied to claims 1-3, 5-7, 11-22, 24-30, 40, 41, 43-48, 51-59, 88 and 89 above.

Johnson teaches a method of drilling and cementing a wellbore comprising drilling a wellbore wherein the wellhead is positioned on the ocean floor and the

assembly comprises pipe strings extending downward that are identical to pipe strings extending upward and a riser to inject mud as detailed above.

Johnson does not disclose expressly injecting a fluid of the composition claimed.

Reddy teaches a method of using—specifically cementing—a fluid in a subterranean formation comprising introducing said fluid into the subterranean formation through a well bore—including pumping—wherein the fluid comprises a base fluid and a portion of elastic particles, wherein the base fluid is present at from about 30% to about 120% by weight of the cement and may be an aqueous or organic liquid and if organic is capable of emulsifying a water solution of salts and the particles are present in the range of from about 1% to about 200% by weight of the cement, can be pre-expanded up to about 8 times their original diameter, which calculates to up to 268 times their original volume by $\frac{4}{3}\pi r^3$ before being added to composition with an internal fluid—including the elected internal fluid, air—are comprised of a copolymer of styrene and divinylbenzene or styrene and acrylonitrile or a terpolymer of styrene and vinylidene chloride and acrylonitrile—including EXPANCEL particles as exemplified by applicant as detailed above.

Since Reddy teaches the same composition as claimed, the density, compressibility and pressure and temperature resistance of the particles and the variability of the density of the fluid of the Reddy composition would inherently be the same as claimed.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the fluid composition of Reddy in the method of Johnson. The

motivation to do so would have been to provide compositions that can withstand the cyclical stresses that occur during the life of the well (Reddy ¶0006).

The applied reference, Reddy, has at least one common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 USC 102(e). This rejection under 35 USC 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 USC 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 USC 103(c) as prior art in a rejection under 35 USC 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Response to Arguments

10. Applicant's arguments filed 23 July 2007 have been fully considered but they are not persuasive.

Applicant argues that Jorda fails to teach elastic particles which do not require additional polymerization; however, the limitation "which do not require additional

polymerization” are not recited in the instant claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant further argues, without providing evidence, that the particles disclosed in Jorda do not exhibit “isothermal compressibility”; However, since Jorda teaches the same composition as claimed, the density, compressibility and pressure and temperature resistance of the particles and the variability of the density of the fluid of the Jorda composition would inherently be the same as claimed.

Applicant finally argues that Reddy and Ravi are disqualified as prior art under 35 USC 102(e) as being “by another” by the declarations of B. Raghava Reddy and of Krishna M. Ravi filed 23 July 2007; However, as discussed in detailed above the declarations are insufficient in showing that Reddy and Ravi are not “by another”.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1712

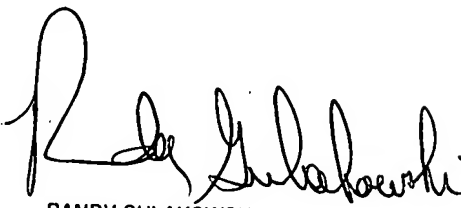
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Kugel whose telephone number is (571) 272-1460. The examiner can normally be reached 6:00 AM – 4:30 PM Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/TJK/
Patent Examiner, Art Unit 1712


RANDY GULAKOWSKI
SUPERVISORY PATENT EXAMINER
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